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MINUTES FROM ENVIRONMENTAL CLEANUP PROJECT TEAM MEETING DATED 13  
OCTOBER 1999 CNC CHARLESTON SC  
10/13/1999

**Naval Base Charleston  
Environmental Cleanup Project Team  
Meeting Minutes**

**Date:** 13 to 14 Oct 99

**Place:** NH-C/Project Team Room

**Time:** 0800 - 1700

**Attendees:** Tony Hunt (SDIV); Paul Bergstrand, Mihir Mehta, Charles Watson, Susan Peterson (DHEC); Dann Spariosu (USEPA); Todd Haverkost, Charlie Vernoy, Larry Bowers (EnSafe); Joe Land (CLD)

**Invited Guests:** Charlie Black, Gabe Magwood (SDIV); David Scaturro (DHEC); Pei Fung, Steve Parker, Greg Temple, Keith Johns (EnSafe), Lanny Diasio (SCRA - former DET)

**Leader:** Mihir Mehta

**Scribe:** Larry Bowers

**DISCUSSIONS**

9910-M479	Joe	<b>Check-in</b> <ul style="list-style-type: none"><li>- Review of ground rules.</li><li>- Check-in and introduction of PT members.</li><li>- Revise and check meeting agenda.</li></ul>
9910-M480	Mihir	<b>Meeting Minute Correction</b> <ul style="list-style-type: none"><li>- Mihir requested that today's PT meeting minutes reflect a correction for last month's PT meeting minutes.</li><li>- Corrections are noted as: 1) Action Item A261 is <i>completed</i>, 2) Page 2 of the minutes under SSL discussion under bullet six ... apply DAF <i>to zone, site or area as appropriate</i>, and 3) Page 7 of the minutes ... Zone K soils are not necessarily homogeneous (<i>per DHEC - this statement should not be under a "consensus category"</i>) ... yet Larry explained to Mihir that the statement was merely a subjective term for Zone K soils to be used in conjunction with comparisons to other zone soils such as the more heterogenous soils typically located in Zones F, G and E ... <i>it was not meant as a consensus statement and thus an error on part of the scribe.</i></li></ul>
9910-M481	Tony	<b>Action Item Follow up</b> <ul style="list-style-type: none"><li>- A257; on this meeting agenda.</li><li>- A258; info should be out and available, the DET has distributed it, will re-check.</li><li>- A259; being worked, will complete this week.</li><li>- A260; we have info but Craig has not yet provided to Todd, will re-check.</li><li>- A261; parking lot item for this meeting.</li><li>- A262; on this meeting agenda.</li><li>- A263; on this meeting agenda.</li></ul>
9910-M482	Mihir	<b>DHEC Where Abouts</b> <ul style="list-style-type: none"><li>- 10 Jan to end of Jan; Mihir on vacation.</li></ul>

		<ul style="list-style-type: none"> <li>- 24 Dec to 7 Jan; Paul on vacation.</li> </ul>
9910-M483	Tony	<p><b>RAB Debrief</b></p> <ul style="list-style-type: none"> <li>- Very poor showing, again (1 RAB member present and only a few community members present).</li> <li>- Discussion ensued regarding RAB membership (and retention) strategy; possibly change meeting place seeming the controversial CTF closure has been resolved and local community members are not really interested in nonCTF issues.</li> <li>- RAB will definitely have more of an interest during the CMS process when their input (and the public's input) will be solicited for final site remedies.</li> <li>- Navy would like to send out reminders that the CMS is on the way and RAB/community input will be requested.</li> <li>- Tony and Keith Johns (EnSafe) are currently considering other strategies to garner more public interest in CNC BRAC activities.</li> <li>- Tony suggested that the PT wait till 2000 (Jan) before any new RAB-related decisions or changes are made. The upcoming holidays will only counter any changes made now and past history indicates that RAB involvement is very limited during the holiday season.</li> <li>- Larry stated that RAB and public interest will likely increase as the study turns to remedial alternative evaluation and selection (CMS and subsequent SOB).</li> </ul>
9910-M484	Todd	<p><b>GW Monitoring Plan</b></p> <ul style="list-style-type: none"> <li>- Hand out provided (3 figures showing well locations and well inventory spread sheet as of 9 Oct 99). EnSafe as well as non EnSafe wells are depicted.</li> <li>- Objective; determine which wells should go into a LT monitoring plan.</li> <li>- Since last PT meeting, EnSafe has rec'd survey data for 159 of about 200 new TetraTech (TT) wells. This info was incorporated into the figure and will have to be revised when the remaining TT wells are surveyed.</li> <li>- Consensus objective of GW monitoring plan: 1) to monitor known off base migration, 2) to monitor migration of impacted GW to SW, 3) to monitor wells with known GW problems, 4) for sites with confirmed GW problems, to monitor until CA is in place, and 5) to facilitate decision whether further CA is necessary or NFA. This PT consensus item is repeated at the end of these minutes.</li> <li>- Todd's handout provided 4 work sheets (wells req additional characterization as of 9 Oct 99, wells req quarterly monitoring, and wells req bi-annual and annual monitoring).</li> <li>- Primary steps in the implementation of such a LT monitoring plan is: develop inventory and determine sites and specific wells to monitor, freq of monitoring and analytes, and exist strategy.</li> <li>- Discussion ensued regarding LT monitoring; an RFI or CMS decision? DHEC stated it was a RFI decision and SDIV disagreed. USEPA said it mattered not (that is, its not necessary to classify LT monitoring as part of the RFI or CMS process - just do whatever is necessary to gain closure at the site).</li> </ul>
9910-M485	Todd	<p><b>SSL Refinement</b></p> <ul style="list-style-type: none"> <li>- Last meeting we discussed area vs SS SSL.</li> <li>- Two primary issues are TOC data for soil/water partition coefficient and DAF.</li> <li>- Via Barry Doll (EnSafe); carbon data for an entire zone is extremely variable ... therefore it is proposed to use the lower confidence limit of the geometrical</li> </ul>

		<p>mean of say 7 to 8 samples per each site. Basically its easier and more accurate to provide SS carbon data as opposed to zone or area specific carbon data as we discussed during the last PT meeting.</p> <ul style="list-style-type: none"> <li>- In summary: carbon data for each site will be used to determine SS soil/water part. coefficients ... but DAF will not be SS (per figure of soil types) ... 2 DAFs will be sufficient for Zone E but other zones may require several DAFs ... organic data varies widely at CNC while conductivity does not ... therefore, SITE SPECIFIC TOC (statistical based) versus AREA SPECIFIC DAF (area characteristic based).</li> </ul>
9910-M486	Todd	<p><b>AOC 611 Example Figs for RFI</b></p> <ul style="list-style-type: none"> <li>- Handout provided.</li> <li>- Todd presented several (about 8) figures to the PT. The site figures consisted of aerial photographs overlayed by the current or former RFI site, overland water flow direction arrows, adjoining sites and zones, subsurface utilities, site and adjacent site sample points, and surface and subsurface COCs delineated to specific thresholds such as BG and RBCs.</li> <li>- DHEC requested a few modifications to the figure 1 (please include adjacent zones, date aerial foto if known, etc.). EnSafe concurred. Other figures were fine with the PT and well received.</li> <li>- These figures represent the general figures that will be presented in the revised RFIs.</li> </ul>
9910-M487	Project Team	<p><b>Data Gap Discussion</b></p> <ul style="list-style-type: none"> <li>- RFI Data Gap; data that could change the risk calculation and RFI completion (that is, risk, f&amp;t, n&amp;e).</li> <li>- CMS Data Gap; data that could affect engineering calculations for the purpose of evaluating potential remedial alternatives (that is, volume, surface area).</li> <li>- Mihir stated the RFI should sum up the DET ISM and its compliance with RFI RGOs. If the ISM satisfies the RGOs then a NFA statement in the RFI is acceptable ... CMS not required but a SOB stating NFA would be required so as to provide an avenue for public comment. This is a PT consensus item, please refer to back of these minutes.</li> </ul>
9910-M488	Greg	<p><b>Zone E RFI Additional Field Work Scoping</b></p> <ul style="list-style-type: none"> <li>- Handout provided (site summary, site figures and proposed sampling summary table).</li> <li>- Additional work has been proposed in Zone E because of 1) DHEC comments requested additional sampling, and 2) EnSafe located data gaps at 3 sites [mostly due to chlorinated solvents in GW &gt; MCLs at cluster SWMU 22/25 and AOC 554 and at cluster SWMU 87/172 and AOC 576 and at cluster AOC 559/560/561].</li> <li>- Greg presented each Zone E site and briefly discussed the rationale for the field work proposed. No PT members objected to any of the work proposed. No PT members proposed additional field work beyond what Greg presented.</li> <li>- AOC 558; the issue of sampling below concrete at this site will be revisited by EnSafe. The issue was left unresolved at the PT table.</li> </ul>
9910-M489	Steve	<p><b>Zone K RFI Additional Field Work Scoping</b></p> <ul style="list-style-type: none"> <li>- Handout provided (site summary, site figures, proposed sampling).</li> <li>- SWMU 161: OWS, waste oil tank and sump. Paul suggested a few additional borings downgradient of the waste oil tank in the area of the "old" garage. Upon further discussion it was agreed that EnSafe would first review the results of data from the proposed borings to determine the need, if any, for</li> </ul>

		<p>additional borings or wells downgradient in the area Paul expressed concern.</p> <ul style="list-style-type: none"> <li>- SWMU 162: Old sludge drying beds. EnSafe proposed additional sludge characterization via hand augers. Obtain samples at suspected sludge depth (approx 3 feet bgs), otherwise upper interval sample represents fill material. The PT found this approach acceptable.</li> <li>- Eco Risk: Discussion ensued about obtaining EPA involvement, follow decision management steps and involve DHEC.</li> <li>- SWMU 164: It was agreed that the revised RFI text would include additional information regarding HM handling and processing, and that EnSafe would re-check the building for drains, cracks in floor, etc. and report such in the RFI. Also, EnSafe will re-check the SAA NW of the building.</li> <li>- AOC 698: Move some soil samples closer to building due to DHEC concern about potential wall paint flaking as a source of inorganics.</li> <li>- Clouter Island: Metals and diox detected outside of SWMU boundary (FYI). Two additional temp wells are proposed upgradient of solvent (TCE) and Hg hit followed by two rounds of GW sampling. Exit strategy will consist of installation of the 2 temp wells, sample/analyze about 3 to 4 weeks apart (time constraint will NOT allow for quarterly spread and its not necessary for this site anyway), if [ ] &lt; MCL then NFA and if [ ] &gt; or approx MCL then a risk management decision by the PT is required as to the next step. This is a consensus item as listed in the back of these minutes.</li> <li>- SWMU 166: Paul stated that well No. 12 was damaged. Please respond accordingly. Also, please inform neighbors to the south of site of the current GW contamination.</li> </ul>
9910-M490	Tony	<p><b>Arsenic</b></p> <ul style="list-style-type: none"> <li>- Handout provided; PAH and Heavy Metal Concentrations in Sediments at Coastal South Carolina Marinas by ECT, and Study of State Soil Arsenic Regulations by AEHS of UMASS.</li> <li>- Second handout provided ranges of arsenic and BG, etc., in State soil. For SC the range is 2 to 11 ppm and for the Navy base its 9 to 23 ppm.</li> <li>- The PT discussed page 4 of the second handout (sources of soil arsenic at industrial sites). The team attempted to ID potential sources of arsenic at CNC by reviewing the list on page 4.</li> </ul>
9910-M491	Lanny	<p><b>GIS ArcView Demo</b></p> <ul style="list-style-type: none"> <li>- Handout provided.</li> <li>- Lanny presented an ArcView demo to the PT. The ArcView program included an overview of the base (non contiguous property was not included though) with GIS located tanks, asbestos and LBP sites, available reports, site photographs, abatement work and other past or current environmental action (with the exception of RFI and CMS activities). The environmental action primarily included former DET activities such as asbestos, LBP and UST related assessment and abatement work</li> <li>- The primary purpose of the demo was to show the availability of GIS entered data and how it could help with the FOST process.</li> <li>- The PT favorably received the ArcView demo.</li> <li>- Lanny offered his support to the PT or to anyone who desired to further explore his ArcView project.</li> </ul>
9910-M492	Tony and Charlie B.	<p><b>New Contractor Questions</b></p> <ul style="list-style-type: none"> <li>- Handout provided. Three set of questions; 1) LRA related, 2) RFP or Scope related, and 3) Regulatory related.</li> </ul>

		<ul style="list-style-type: none"> <li>- Charlie Black (SDIV) was available to answer PT questions/concerns.</li> <li>- PT discussed "regulatory related questions - 6 questions."</li> <li>- For Q1, DHEC stated that the answer provided on RAB Q/A document dated April 94 would suffice. In essence the answer is "yes" with conditions.</li> <li>- For Q2, DHEC stated that MCLs are the GW cleanup goal.</li> <li>- For Q3, DHEC stated see answer to Q1.</li> <li>- For Q4, DHEC stated no ... staff level will remain as is.</li> <li>- For Q5, DHEC stated BG values for zone-specific soils is available in the RFI ... for GW, see answer to Q2.</li> <li>- For Q5, PT stated no due to regulatory hurdles ... this issue has been visited prior by the CLEAN contractor.</li> <li>- To the reader of these minutes: The above listed answers are NOT definitive. This was a first pass by the PT. DHEC will respond in writing in a few days. The final answers will be made available to the 3 short-listed firms AFTER the final answers are fully determined.</li> </ul>
9910-M493	Tony	<b>CNC Deliverable Schedule</b> <ul style="list-style-type: none"> <li>- Handout provided. Current schedule outlining RFI, CMS, FOST and FOSL documents.</li> <li>- This scheduled was altered by the PT at the table. The revised version will be sent to PT members by Tony Hunt within a week or so.</li> </ul>
9910-M494	Joe	<b>Future PT Meetings</b> <ul style="list-style-type: none"> <li>- Nov 99 PT meeting in CAE canceled (due to work load and lack of need for meeting).</li> <li>- Dec 99 PT meeting in CHS is still on, 14 and 15 Dec with new contractor likely and existing PT members. Team leader will be Dann and scribe will be Larry.</li> </ul>
9910-M495	Joe	<b>Wrap up and Close Out</b> <p>Positive</p> <ul style="list-style-type: none"> <li>- Reactive with large/important issues.</li> <li>- Vertical profiling discussions by Todd.</li> <li>- Productive meeting.</li> <li>- Good discussion regarding outsourcing.</li> <li>- Todd presentation, RFI figures.</li> <li>- Great job scoping for RFI Zones K and E by Steve and Greg.</li> <li>- No longer pointing fingers with regard to the outsourcing issue.</li> <li>- Scheduling presentation by Tony, nifty high tech graphics.</li> </ul> <p>Negative</p> <ul style="list-style-type: none"> <li>- Overtime on many items.</li> <li>- Scoping sessions of important RFI Zones E and K occurred at end of day, not good.</li> <li>- Number of copies for PT distribution (not enough).</li> <li>- Scoping was tedious and not fully clear as to its objective.</li> <li>- Not very creative with solutions for nagging issues that keep coming back at us like the Energizer Bunny.</li> </ul>

## ACTION ITEMS

9910-A264	Tony/Todd	Review conditional approval letters and ID sites that req additional monitoring in the CMS. By 15 Oct 99.
9910-A265	Project Team	Research issue on GW monitoring ...where to conduct monitoring, how to report, and exit strategy. By 15 Oct 99.
9910-A266	Tony	Check USAF Base Environmental for info regarding fire training pit and WWTP near SWMU 162. By next PT meeting.
9910-A267	Todd	Check and repair well damage, SWMU 166 No. 12. By Dec 99.
9910-A268	Tony	Ensure neighbors to the south of SWMU 166 are informed of GW impacts. Via fact sheet. By 2000.
9910-A269	?	Provide GIS data for future reports (sampling data, site data). By ?
9910-A270	Mihir	Six questions from contractors for regulators. Provide written response within 10 days of receipt of Navy's written response.
9910-A271	Tony	Provide Zone J scoping package. By Dec 99.
9910-A272	Paul	Provide DHEC approval letter to Tony regarding FCUnion. By Nov 99.

## CONSENSUS ITEMS

9910-C10	LT GW Monitoring Plan - Objective: 1) to monitor known off base migration, 2) to monitor migration of impacted GW to SW, 3) to monitor wells with known GW problems, 4) for sites with confirmed GW problems, to monitor until CA is in place, and 5) to facilitate decision whether further CA is necessary or NFA.
9910-C11	DET ISM and Relationship to RFI, CMS and SOB - DHEC stated the RFI should sum up the DET ISM and its compliance with RFI RGOs. If the ISM satisfies the RGOs then a NFA statement in the RFI is acceptable ... CMS not required but a SOB stating NFA would be required so as to provide an avenue for public comment.
9910-C12	Clouter Island GW - Two additional temp wells are proposed upgradient of solvent (TCE) and Hg hit followed by two rounds of GW sampling. Exit strategy will consist of installation of the 2 temp wells, sample/analyze about 3 to 4 weeks apart (time constraint will NOT allow for quarterly spread and its not necessary for this site anyway), if [ ] < MCL then NFA and if [ ] > or approx MCL then a risk management decision by the PT is required as to the next step.